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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,883	12/13/2005	Mark F. Teasley	CL2179USPCT	3646

7590 10/02/2009

E I du Pont de Nemours & Company
Legal Patents
Wilmington, DE 19898

EXAMINER	
QIAN, YUN	
ART UNIT	PAPER NUMBER
1793	
MAIL DATE	DELIVERY MODE
10/02/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/560,883	TEASLEY, MARK F.	
	Examiner	Art Unit	
	YUN QIAN	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 June 2009*.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-50* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election of Group II claims 28-30 with traverse in the reply filed on June 24, 2009 is acknowledged.

Applicant's arguments with respect to Group I have been fully considered and are persuasive. Desmarteau et al. (US 5,463,005) does not specifically teach the composition containing an aromatic heterocyclic fluorinated sulfonamide polymer as per applicant claim 1.The Restriction has been withdrawn.

However, upon further consideration, a new ground(s) of restriction is made as follows:

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claims 1-27, drawn to fluorinated sulfonamide substituted heterocyclic compounds having the general structure (I).

Group II, claims 28-30, drawn to a fluorosulfonyl substituted heterocyclic compounds having structure (II).

Group III, claims 31-37, drawn to a process for synthesizing fluorosulfonyl-containing compounds having the general structure (II).

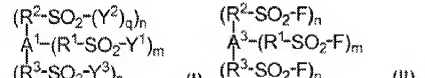
Group IV, claims 38-44, and 46 drawn to a solid electrolyte membrane containing a fluorinated sulfonamide substituted heterocyclic compound having the general structure (I).

Group V, claims 45, and 47-48, drawn to a catalyst containing the general structure (I).

Group VI, claims 49-50, drawn to the electrochemical cell containing a fluorinated sulfonamide substituted heterocyclic compound having the general structure (I).

The inventions listed as Groups I and Group II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The general structure (I) as shown below in Group I is different from the general structure (II) (shown below) in the Group II:

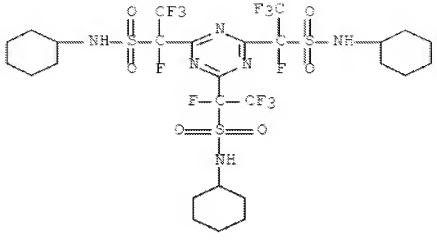


Wherein Group I:

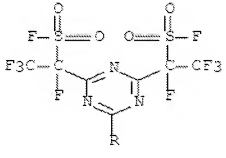
Y^1 is -OH, $-NH-SO_2-R^4$ wherein R^4 is a monovalent fluorinated group, -NH-, $-NH-SO_2-R^5-SO_2-NH-$, or $-NH-SO_2-R^6-A^2-R^7-SO_2-NH-$, wherein A^2 is a divalent heterocyclic group and R^5, R^6, and R^7 are divalent fluorinated groups; and Y^2 and Y^3 are -OH or $-NH-SO_2-R^4$; with the proviso that when m and n are each equal to 1, p is 0 to 1, and q is 0, Y^1 is selected from the group consisting of -NH-, $-NH-SO_2-R^5-SO_2-NH-$, and $-NH-SO_2-R^6-A^2-R^7-SO_2-NH-$.

Furthermore, the invention of Groups I, IV, V and VI is related the fluorinated sulfonamide substituted heterocyclic compounds having the general structure (I), and is obvious over Ragulin et al. (Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1969), (10),2224-30), which discloses a fluorinated sulfonamide substituted 1,3-,5-triazine as shown below (abstract):

Adding NH3 slowly to 2-hexafluoropropane β-sultone in Et2O at 0° gave NH4F and HCNSO2CF(CF3)SO2F. This mixture treated with P2O5 and heated slowly to 150-80° in vacuo gave FSO2CF(CF3)CN, b. 43° (pressure unstated), d20 1.5584, n20D 1.30 60, and some 2,4,6-tris-(α-sulfofluoridyltetrafluoroethyl)-1,3,5-triazine (I), b2 98°, m. 45°; the former is obtained in lower yield when the reaction is run at normal pressure. Treating the nitrile monomer above with dry HCl in MeOH gave 82% above triazine, which with cyclohexylamine in Et2O readily afforded the tris(N-cyclohexyl-sulfonamido) derivative, a glassy solid. Me2NNH gave the oily tris(sulfonamide) derivative, while morpholine gave the tris(sulfomorpholide), an oil, and piperidine gave a waxy sulfopiperidide analog.



In addition, the invention of Groups II and III, is related sulfonyl fluoride compound having the structure (II), and is obvious over Ragulin et al. (Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1969), (10),2224-30), which discloses a fluorinated sulfonyl fluoride substituted 1,3-,5-triazine as shown below (abstract):



Accordingly, the special technical features linking the inventions, such as a fluorinated sulfonamide and a fluoride sulfonyl fluoride as shown above, do not provide a contribution over the prior art, and no single general inventive concept exists. Therefore, restriction is appropriate.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder**. Further, note that the prohibition against double

patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR I .I 7(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUN QIAN whose telephone number is (571)270-5834. The examiner can normally be reached on Monday-Thursday, 10:00am -4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENGO/
Supervisory Patent Examiner, Art Unit 1793

/YUN QIAN/
Examiner, Art Unit 1793